



03500.017349.

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
KAZUHIRO TAKADA ) Group Art Unit: 1653  
Application No.: 10/725,396 )  
Filed: December 3, 2003 )  
For: PROBE CARRIER, METHOD OF )  
PRODUCING THE PROBE CARRIER, )  
METHOD OF EVALUATING THE PROBE )  
CARRIER AND METHOD OF )  
DETECTING A TARGET NUCLEIC ACID )  
USING THE SAME : March 31, 2005

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

LETTER

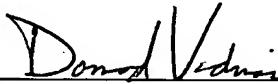
Sir:

Submitted herewith is copy of an International Preliminary Examination Report which issued in the international application from which the subject application claims benefit of priority. Applicant notes that all of the documents cited in the International Preliminary Examination Report were previously cited in the January 27, 2004 Information Disclosure Statement. Accordingly, a Form PTO-1449 does not accompany this Letter.

Favorable consideration is respectfully requested.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office by telephone at (714) 540-8700. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

  
\_\_\_\_\_  
Attorney for Applicant  
Damond E. Vadnais  
Registration No. 52,310

FITZPATRICK, CELLA, HARPER & SCINTO  
30 Rockefeller Plaza  
New York, New York 10112-3800  
Facsimile: (212) 218-2200

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PATENT COOPERATION TREATY

PCT/JP2003/008196

PCT



NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT  
(PCT Rule 72.2)

From the INTERNATIONAL BUREAU

To:

OKABE, Masao  
No. 602, Fuji Bldg.  
2-3, Marunouchi 3-chome  
Chiyoda-ku, Tokyo 100-0005  
JAPON



Date of mailing (day/month/year) 17 March 2005 (17.03.2005)
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Applicant's or agent's file reference CFO17349WO	IMPORTANT NOTIFICATION
International application No. PCT/JP2003/008196	International filing date (day/month/year) 27 June 2003 (27.06.2003)
Applicant CANON KABUSHIKI KAISHA et al	

**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

**2. Transmittal of the copy of the translation to the elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

EP

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

JP, US

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

**It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.**

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

Masashi Honda

Facsimile No.+41 22 740 14 35



**PATENT COOPERATION TREATY**  
**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference  CFO17349WO	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No.  PCT/JP2003/008196	International filing date ( <i>day/month/year</i> )  27 June 2003 (27.06.2003)	Priority date ( <i>day/month/year</i> )  28 June 2002 (28.06.2002)
International Patent Classification (IPC) or national classification and IPC  G01N 33/53, C12Q 1/68, C12M 1/00		
<p>Applicant  CANON KABUSHIKI KAISHA</p>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
- a.  (*sent to the applicant and to the International Bureau*) a total of \_\_\_\_\_ sheets, as follows:
- sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
  - sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
- b.  (*sent to the International Bureau only*) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:
- Box No. I Basis of the report
  - Box No. II Priority
  - Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - Box No. IV Lack of unity of invention
  - Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - Box No. VI Certain documents cited
  - Box No. VII Certain defects in the international application
  - Box No. VIII Certain observations on the international application

Date of submission of the demand  23 January 2004 (23.01.2004)	Date of completion of this report  09 June 2004 (09.06.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/008196

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- This report is based on translations from the original language into the following language \_\_\_\_\_, which is language of a translation furnished for the purpose of:
- international search (under Rules 12.3 and 23.1(b))
  - publication of the international application (under Rule 12.4)
  - international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- The international application as originally filed/furnished

- the description:

pages \_\_\_\_\_, as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- the claims:

pages \_\_\_\_\_, as originally filed/furnished

pages\* \_\_\_\_\_, as amended (together with any statement) under Article 19

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- the drawings:

pages \_\_\_\_\_, as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

the description, pages \_\_\_\_\_

the claims, Nos. \_\_\_\_\_

the drawings, sheets/figs \_\_\_\_\_

the sequence listing (*specify*): \_\_\_\_\_

any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages \_\_\_\_\_

the claims, Nos. \_\_\_\_\_

the drawings, sheets/figs \_\_\_\_\_

the sequence listing (*specify*): \_\_\_\_\_

any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/JP 03/08196

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1-19	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-19	NO
Industrial applicability (IA)	Claims	1-19	YES
	Claims		NO

## 2. Citations and explanations

Claims 1-19

Document 1: JP 2001-050931 A (Takatoshi MMIYAHARA), 23 February 2001

Document 2: JP 6-136551 A (Canon Inc.), 17 May 1994

Document 3: JP 6-192841 A (Canon Inc.), 12 July 1994

Document 4: JP 2002-65299 A (Canon Inc.), 05 March 2002

Document 1 discloses a probe support wherein a single-stranded DNA probe is immobilized upon a metal electrode via a sulfur atom (a thiol group).

In addition, the feature of using <111> oriented metal single crystals in the material for a metal electrode is disclosed in document 2; therefore, it is considered to be easy for a person skilled in the art to conceive of using <111> oriented metal single crystals in the metal electrode that is disclosed in document 1.

Furthermore, document 3 indicates that <111> oriented metal single crystals can be used in the sample substrate for a scanning tunnelling microscope, and it is thought that a person skilled in the art could detect by means of a scanning tunnelling microscope instead of detecting by means of an electrode, as necessary.

Moreover, the feature of conferring a DNA probe to a

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support by means of an ink-jet method is disclosed in document 4.